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EXAMINER

BARQADLE, YASIN M

ART UNIT

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2153

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12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/533,944

Applicant(s)

INOUE ET AL.

Examiner

Yasin M Barqadle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 26 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **Response to Amendment**

- Claims 1-26 are presented for examination.
- The amendment filed on March 22, 2004 has been fully considered but are moot in view of the new ground(s) of rejection.

### **Response to Arguments**

In response to applicant's arguments in page 13 that ``Lumelsky fails to disclose providing such a management unit which function to receive a message from the mobile computer...'' Examiner contends that Lumelsky teaches a management unit (fig. 3, 212) that handles the maintenance of storage and retrieval of data. However, PRSS 201 performs the act of receiving message from the mobile client and determines its network address, which is part of the request data package (col. 11, lines 53-65 and col. 20, lines 25-36).

In response to applicant's arguments in page 14 that ``Lumelsky fails to disclose a cache servers located within a geographic region defined to an information provider''. Examiner admits that Lumelsky does not teach this limitation explicitly. However, Liu discloses this limitation as discussed in the 103 rejection. See Liu [col. 6, lines 11-35].

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In response to applicant's arguments concerning a registered premier user on pages 14 and 15. Examiner contends that Lumelsky discloses that only registered users having appropriate decryption capability could listen to CES-based files (col. 11, lines 32-36). Therefore, Lumelsky clearly teaches this limitation.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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Claims 1-10 and 16-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Lumelsky US (6246672).

As per claims 1, Lumelsky teaches an information delivery system for delivering WWW information (data repository 401, fig. 1) provided by information servers on Internet to mobile computers (fig. 1, 301) connected to the Internet through a wireless network (fig. 1, 403, comprising:

a plurality of cache servers (plurality of PRSS fig. 1, 201 servers containing system cache 212, fig.3) provided in association with the wireless network and configured to be capable of caching WWW information provided by the information servers [col. 8, lines 16-55].

a management unit (PRSS 201 includes cache management function and cache manager model fig. 3, 212) configured to manage caching state of the cache servers, by receiving a message indicating at least a connected location of a mobile computer in the wireless network from the mobile computer (mobile user's log-on request is received by the PRSS 201 which determines user's network address from the request data package), selecting one or more cache servers located nearby the mobile computer according to the message, and controlling said one or more cache servers to cache selected WWW information selected for the mobile computer, so as to enable faster accesses to the selected WWW information by the mobile computer [Col. 11, lines 8-65 and col. 19 , line 33 to col. 20, line 52].

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As per claim 2, Lumelsky teaches where the selected www information is selected according to information related to a user of a mobile computer [col. 8, lines 16-55].

As per claim 3, Lumelsky teaches a system wherein the selected WWW information is selected according to information related to an information provider of the selected WWW information [col. 8, lines 16-55].

As per claim 4, Lumelsky teaches a system wherein the mobile computer sends the message containing identification information for specifying one or more WWW information, at least at a time of network connection [col. 11, lines 48-65 and col. 22, lines 1-24]; and

the management unit controls said one or more cache servers to cache WWW information selected according to the identification information contained in the message as the selected WWW information [col. 11, lines 48-65 and col. 22, lines 1-24].

As per claim 5, Lumelsky teaches a system the system wherein the mobile computer sends the message containing a user ID of a user of the mobile computer [Col.11, lines 5-36]; and the management unit registers in advance user IDs of users of the mobile computers (PRSS 201 authenticates users by their unique terminal ID) in correspondence to respective identification information for specifying one or more WWW information, and

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controls said one or more cache servers to cache said one or more information specified by the identification information registered in correspondence to the user ID contained in the message as the selected WWW information [Col. 11, line 48 to col. 12, line 10 and col. 22, lines 1-24].

As per claim 7, Lumelsky teaches a system wherein either the mobile computer or the management unit predicts another one or more cache servers to be selected when a need to change cache servers nearby the mobile computer due to moving of the mobile computer is predicted to arise, and the management unit controls said another one or more cache servers to cache the selected WWW information according to a result of prediction [Col. 8, lines 38-60 and col. 20, lines 25-63].

As per claim 8, Lumelsky teaches a system wherein the management unit maintains an update frequency information indicating an update frequency of WWW information provided by each information provider, and controls said one or more cache servers to carry out a cache update processing with respect to the selected WWW information according to the update frequency information [col. 19, line 41 to col. 20, line 50].

As per claim 9, Lumelsky teaches a system wherein the management unit changes the selected WWW information cached in said one or more cache servers according to at least one of a likelihood by

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which each WWW information is expected to be accessed and a priority level determined for each WWW information, when a cache state of any one of said one or more cache servers reaches to a prescribed criterion [Col. 11, lines 8-60 and col. 20, lines 25-63].

As per claim 10, Lumelsky teaches a system wherein the wireless network comprises a first network for providing data transmission at relatively low transfer rate, and a second network for providing data transmission at relatively high transfer rate at least in a downlink direction, and the management unit receives the message from the mobile computer via the first network, and the cache servers transfer the selected WWW information to the mobile computer via the second network [fig. 1 and Col. 8, lines 1-60 and Col. 11, lines 8-60].

Regarding claims 16 and 17, these are method claims with similar limitations as claims 1 above. Therefore, they are rejected with the same rationale.

As per claims 18 and 19, Lumelsky teaches a management device (fig. 3, 212 and 212A) for use in an information delivery system for delivering WWW information provided by information servers on Internet to mobile computers connected to the Internet through a wireless network (fig. 1, 403), using a plurality of cache servers (fig. 1, PRSS 201) provided in association with the wireless network and configured to be capable of caching WWW



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information provided by the information servers, the management device comprising:

a first unit configured to receive a message indicating at least a connected location of a mobile computer in the wireless network from the mobile computer [mobile user's request is received and the PRSS determines a user's network address which is part of the request data package Col. 11, lines 8-65; col. 20 lines 25-52];

a second unit configured to select one or more cache servers located nearby the mobile computer according to the message [Col. 11, lines 8-65; col. 20 lines 25-52]; and

a third unit configured to control said one or more cache servers to cache selected WWW information selected for the mobile computer, so as to enable faster accesses to the selected WWW information by the mobile computer [Col. 11, lines 8-65; col. 20 lines 25-52].

As per claim 20, Lumelsky teaches a mobile computer device for use in an information delivery system for delivering WWW information provided by information servers on Internet to mobile computers connected to the Internet through a wireless network (fig. 1, 403), using a plurality of cache servers (fig. 1, PRSS 201) provided in association with the wireless network and configured to be capable of caching WWW information provided by the information servers, the mobile computer device comprising:

a first unit configured to maintain a user ID of a user of

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the mobile computer device [Col. 11, line 48 to col. 12, line 10];

a second unit configured to obtain a connected location information regarding a connection location of the mobile computer device in the wireless network [Col. 11, line 48 to col. 12, line 10]; and

a third unit configured to notify a message containing at least the user ID and the connection location information (mobile user's log-on request is received by the PRSS 201 which determines user's network address from the request data package), to a management device for managing caching state of the cache servers, such that the message causes the management device to select one or more cache servers located nearby the mobile computer device according to the message and control said one or more cache servers to cache selected WWW information selected for the mobile computer device, so as to enable faster accesses to the selected WWW information by the mobile computer device [fig. 1, and Col. 11, line 38 to col. 12, line 25].

As per claim 21, Lumelsky teaches a mobile computer device wherein the third unit notifies the message which also contains a bookmark information of a WWW browser operating on the mobile computer device, such that the selected WWW information is selected according to the bookmark information contained in the message [col. 10, line 63 to col. 11, line 47].

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As per claims 22 and 23, Lumelsky teaches a cache server device for use in an information delivery system for delivering WWW information provided by information servers on Internet to mobile computers connected to the Internet through a wireless network, using a plurality of cache servers provided in association with the wireless network, the cache server device comprising:

- a cache memory (fig. 3, 212) configured to cache WWW information provided by the information servers [Col. 8, lines 16-55]; and

- a caching processing unit configured to acquire selected WWW information selected for a mobile computer from the information servers and store the selected WWW information into the cache memory, when the cache server device is included in one or more cache servers located nearby the mobile computer according to a message indicating at least a connection location of the mobile computer in the wireless network which is sent by the mobile computer, so as to enable faster accesses to the selected WWW information by the mobile computer [Col. 11, lines 8-65 and col. 19 , line 33 to col. 20, line 52].

As per claims 24, Lumelsky teaches a method for providing a caching service with respect to a specific user in a system for delivering WWW information provided by information servers on Internet to mobile computers connected to the Internet through a wireless network, the method comprising the steps of:

- registering the specific user as a premier user (only

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registered user having appropriate decryption capability could listen to CES-based files) in an information delivery system having a plurality of cache servers provided in association with the wireless network and configured to be capable of caching WWW information provided by the information servers [Col. 11, lines 5-36]; and

upon receiving a message indicating at least a connected location of a mobile computer in the wireless network from the mobile computer operated by the specific user (mobile user's request is received and the PRSS determines a user's network address which is part of the request data package Col. 11, lines 8-65), selecting one or more cache servers located nearby the mobile computer according to the message and controlling said one or more cache servers to cache selected WWW information selected for the specific user, so as to enable faster accesses to the selected WWW information by the mobile computer [Col. 11, lines 8-65 and col. 19 , line 33 to col. 20, line 52].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

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the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11-15 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lumelsky US (6246672) in view of Liu USPN (582759).

As per claim 11, Lumelsky teaches the invention as explained in claim 1 above including the limitations addressed in claim 1. However, Lumelsky does not explicitly teach cache servers located within a geographic region defined to an information provider. Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Lumelsky, as evidenced by Liu USPN. (5825759). In analogous art Liu, whose invention is about data streaming using caching servers, discloses a system with cache servers located within a geographic region defined for data service providers [col. 6, lines 11-35]. Giving the teaching of Liu, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Lumelsky by employing the system of Liu so that mobile users could access data more efficiently from caching servers that are located closer to their geographical region.

As per claim 12, Lumelsky teaches a system wherein information providers are classified into a plurality of classes, and said one or more cache servers and the selected WWW information are specified by the information provider in accordance with a

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predetermined range of numbers permitted for a class to which the information provider belongs [abstract and Col. 8, lines 1-60].

As per claim 13, Lumelsky teaches a system wherein the management unit maintains an update frequency information indicating an update frequency of WWW information provided by each information provider, and controls said one or more cache servers to carry out a cache update processing with respect to the selected WWW information according to the update frequency information [Col. 11, line 48 to col. 12, line 10 and col. 22, lines 1-24].

As per claim 14, Lumelsky teaches a system wherein the management unit changes the selected WWW information cached in said one or more cache servers according to at least one of a likelihood by which each WWW information is expected to be accessed and a priority level determined for each WWW information, when a cache state of any one of said one or more cache servers reaches to a prescribed criterion [Col. 8, lines 38-60 and col. 20, lines 25-63].

As per claim 15, Lumelsky teaches a system wherein the wireless network comprises a first network for providing data transmission at relatively low transfer rate, and a second network for providing data transmission at relatively high transfer rate at least in a downlink direction, and the management unit receives a

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message from the mobile computer via the first network, and the cache servers transfer the selected WWW information to the mobile computer via the second network [fig. 1 and Col. 8, lines 1-60 and Col. 11, lines 8-60].

As per claim 25 and 26, Lumelsky teaches the invention as explained in claim 24 above, except for the limitation of the caching servers located with a geographic region defined to an information provider [see the rejection made on claim 11 above].

#### **Allowable Subject Matter**

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **Conclusion**

The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 703-305-5971. The examiner can normally be reached on 9:00 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 703-305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Yasin Barqadle

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**FRANTZ B. JEAN**  
**PRIMARY EXAMINER**